

Patent Application of

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for

**TITLE: IMPROVED BREAST SUPPORTING GARMENT  
UTILIZING SLIP RESISTANT MATERIALS TO  
CONTROL POSITION OF GARMENT**

**CROSS-REFERENCE TO RELATED APPLICATIONS**

Not applicable.

**BACKGROUND--FIELD OF INVENTION**

This invention relates to brassieres and other garments which serve the function of controlling the movement and position of the breasts of the wearer.

**BACKGROUND--DESCRIPTION OF THE PRIOR ART**

Brassieres and other garments of similar function must stay in their proper position in order to function. In the prior art these garments employ a tight band that

encircles the chest or waist, either combined with straps or strapless. These bands may have elastic areas or may be constructed with elastic in the entire band, and this elastic relieves some of the constricting effect of the bands. In a brassiere with straps, the purpose of band is to keep the brassiere from "riding up", and in the strapless brassiere the purpose of the band is to keep the brassiere from sliding down. If the band is not tight enough in a garment with straps, the breasts can slide down and out of their proper place and be below the cup area entirely. The problem of breasts not staying in place was addressed by Larry L. Krieger in patent 3,254,653 (1966), in which he patented raised areas in the cup to grip the breasts. In Krieger these raised areas could cause irritation to the delicate skin of the breasts. In patent 2,988,087, also Larry L. Krieger, there are "body-gripping knopslke protuberances projecting above the general plane of the fabric" to hold the brassiere in place, that have the same problem, that is, the potential to cause irritation to the wearer. C. A. Porter in patent 2,289,679, E. Cadous in patent 2,524,620, and A. M. Rosenfield et al in patent 2,628,356 employ suction either as a plurality of suction cups or "depressions... formed as closed suction cups" (Cadous) to prevent slippage. Because suction depends on a partial vacuum, that is, a relative difference in air pressure between the suction cup and the surrounding area, normal movement can break the seal around the suction cup, resulting in an equalizing of the air pressure difference and subsequent loss of suction and a shifting of the garment. These suction cups can also cause irritation, and are bulky and unattractive. M. Schottenfels in patent 2,079,426 and B.

D. Morgan in patent 3,276,449 describe brassieres that do not encircle the torso and stay in place on the body through adhesives that stick to the skin. In Schottenfels, the adhesive is "in the character of adhesive material such as surgical or medical tape" which sticks to the skin, and has the disadvantage that it must be replaced with each wearing. The invention of B. D. Morgan employs "pressure sensitive adhesive" and, if the brassiere is to be worn more than once, it must be folded so as to avoid contact between the adhesive layers, which is an inconvenience to the owner. In Henricksen, 6,332,825, a patent previously obtained by the me, the layer of frictionally adhesive material, having an upper limit of .5 mm could difficult to manufacture and lacking in durability. Another problem in a brassiere with straps is that the garment can slide up in the back, and down in the front, so that even if the breasts are in the cup area, the breast are lower that the wearer desires, giving the appearance of sagging breasts. In a strapless brassiere, the garment can slide off the breasts and come to rest at the waist.

This tight band causes annoyance or discomfort at best, at worst it can irritate the intercostal muscles and cause pain. The introduction of elastic materials to ease some of the tension around the torso was an improvement, but does not completely solve of problem of discomfort for the wearer.

## **SUMMARY**

In accordance with the invention presented here, my garment comprises a

torso encircling garment with areas of frictionally adhesive material on the inner surface of the garment.

### **Objects and Advantages**

Accordingly, the objects and advantages of the breast support system presented in this invention are:

(a) to keep the garment and breasts in place by employing a gentle encircling of the torso by the fabric of the garment, and areas of adhesive materials (adhesive in the sense of adhesive friction, that is, resistant to slipping) such as 100 percent silicone rubber or latex rubber, with a thickness between .5 and 2 mm, materials that do not resemble or employ glues or resins that can wear away and leave sticky deposits on the skin,

(b) to avoid discomfort by positioning the areas of silicone rubber or latex rubber so that the areas do not tightly encircle the torso, and such that these areas do not employ methods to create suction or protuberances from the surface of the garment or methods to create suction, eliminating the problem of loss of adhesiveness when air pressure equalized through normal movement of the wearer and its resultant loss of suction,

(c) to create stability in the positioning of the garment by having the areas of frictionally adhesive material in contact with the skin, that is, the material is on the inner surface of the fabric of the garment,

(d) to provide for a variety of adaptations of my invention to any garment that functions to control the movement and position of breasts, such as sports, nursing, general purpose, strapless and padded brassieres, and sleep wear support, or garments that have this invention built into them, such as sports wear, leotards, swim suits, evening gowns, pajamas and night gowns,

(e) to provide garments that are easy to take care of,

(f) to provide garments that will fit into many price ranges, and

(g) to provide the wearer with a secure feeling of knowing that her garment will stay in place and that she looks her best.

## **DRAWING FIGURES**

In the drawings, parts that are closely related have the same number.

Fig. 1 shows the outside of a sports brassiere and Fig. 2 shows the inside of the same garment.

Fig. 3 shows the outside of a general purpose brassiere and Fig. 4 shows the inside of the same garment.

Fig. 5 shows the outside of a strapless brassiere and Fig.6 shows the inside of the same garment.

## **Reference Numerals in Drawings**

10 sports brassiere

11 front portion, outside view

12 back portion, inside view

13 outer shell of brassiere

14 lining of brassiere

15 adhesive material such as 100 percent silicone or latex rubber with a thickness of .5 to 2 mm, that is on the fabric surface

16 breast supporting area

17 straps continuous with the front and back portions

18 front portion, inside view

19 back portion, outside view

- 20 general purpose brassiere
- 21 conventional straps
- 22 breast supporting area of general purpose brassiere
- 23 knitted or woven fabric from yarn containing elastic yarn as a component
- 24 back hook and eye closure
- 25 under wire
- 30 strapless brassiere
- 31 molded cups
- 32 stays
- 33 front hook and eye closure

#### **DESCRIPTION--Figs. 1 and 2--Sports Brassiere Embodiment**

The sports brassiere embodiment **10** viewed right side out of this invention is illustrated in Fig. 1 and in Fig. 2, the garment is viewed inside out. This brassiere **10** has a front portion **11** attached to a back portion **12**. This garment is comprised of two layers of fabric, the outer layer **13** and the inner layer **14**, and this double layer gives extra support to the breasts. The preferred materials for these layers of fabric are knitted fabrics comprised of absorbing or wicking yarns with an elastic yarn as part . The areas of frictionally adhesive material **15** and are placed on the inner surface of the garment on the back **12**, straps **17** and cup area **16**. These areas together serve the function of keeping the garment in place, but not all of them are necessary to perform the function and one can be omitted. This garment has no front or back

opening and can be put on by pulling on over the head or stepping into it.

### **Figs. 3 and 4 Additional Embodiment**

The general purpose brassiere embodiment **20** of this invention is illustrated in Fig. 3, right side out, and Fig. 4 inside out. This brassiere **20** has a front portion **11** attached to a back portion **12** and conventional brassiere straps **21**. The cup area **22** is a single or multiple thickness of woven or knitted fabric, with or without elastic yarn as part of the knitted or woven yarn, with the type of fabric chosen for the desired amount of support. The fabric encircling the torso is a single or multiple layer of knitted or woven fabric with elastic yarn as part of the of the yarn, allowing for freedom and comfort in breathing. The hatched areas **15** are the areas of comprising a thin layer of silicone rubber or latex rubber, here to hold the brassiere in place, while the under wire **25** serves the function of keeping the breasts from sliding down to a position below the cup area **22**. This brassiere has a back hook and eye closure **24**. This embodiment of the invention is useful for the creation of a shapely appearance.

### **Figs. 4 and 5 Additional Embodiment**

The strapless brassiere embodiment **30** is illustrated in Fig. 5 and Fig. 6 and has a front portion **11** attached to a back portion **12**. The cups **31** are of the molded type and also have a thin layer of silicone or latex rubber **15** to help to position the breasts. The areas of silicone rubber or latex rubber **15** around the torso **12** and **18**

serves the function of keeping the brassiere from sliding down. This brassiere can be, as with other embodiments, constructed of single or multiple layers of a variety of fabrics, and again the preferred fabric for the portion encircling the torso will contain elastic yarn as part of the yarn to provide for comfort in breathing and movement of the wearer. This embodiment of the invention has a front hook and eye closure.

These illustrations are not intended to exclude other placement of adhesive material, other combinations of fabrics, other constructions or other types of garments, but are intended to illustrate that there is a range of possible features and garments.

### **Advantages, Conclusions and Scope**

My invention is a method to provide comfort and control in a breast supporting garment that encircles the torso and has areas of frictionally adhesive material on the inner surface of the garment, that is, the surface of fabric that touches the wearer's skin. This system performs its control function while permitting freedom for breathing and movement. By eliminating the need for a tight band encircling the torso, this invention departs from the conventional conception and previous art of garments that encircle the torso and support breasts with the use of the tight encircling band.

Because of the increased comfort, wearers will find that my invention can be worn in any circumstance, including, but not exclusive to sports, dancing and sleeping.